C2BMC (BMDS) Planner Overview
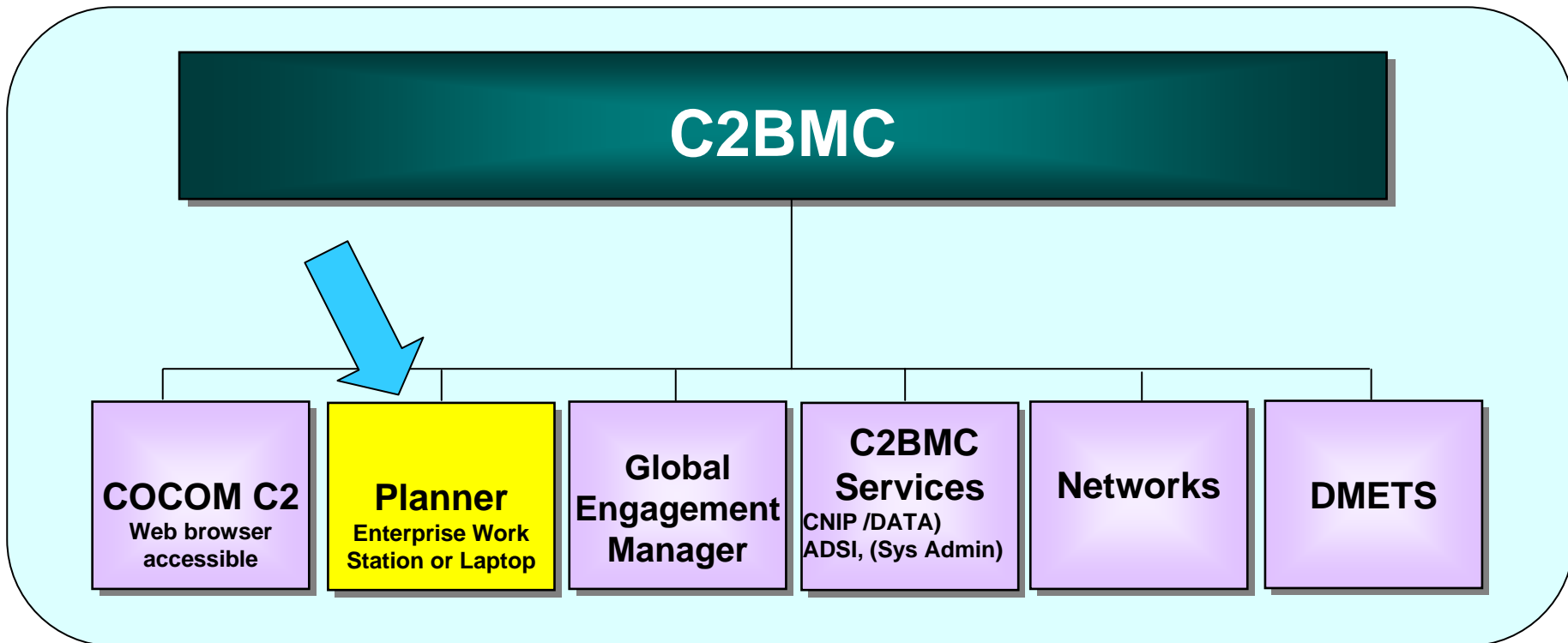
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C2BMC - Product View

C2BMC

COCOM C2	Planner	Global Engagement Manager	C2BMC Services	Networks	DMETS
Web browser accessible	Enterprise Work Station or Laptop		CNIP /DATA) ADSI, (Sys Admin)		

OTHER SERVICES
DCTS, IWS, AMHS/DMS, SIPRNET OUTLOOK, MICROSOFT OFFICE, Web, Interfaces etc..
These fall in the category of Host Center provided Services not fielded as part of the Suite or Laptop configurations

ADSI – Air Defense Systems Integrator
AMHS – Automated Message Handling System
C2 – Command and Control
C2BMC – Command Control Battle Management and Communications
CNIP – C2BMC Network Interface Processor

COCOM – Combatant Command
DCTS – Distributed Collaborative Tool Suite
DMS – Defense Message System
DMETS – Distributed Multi-Echelon Training System
GEM – Global Engagement Manager
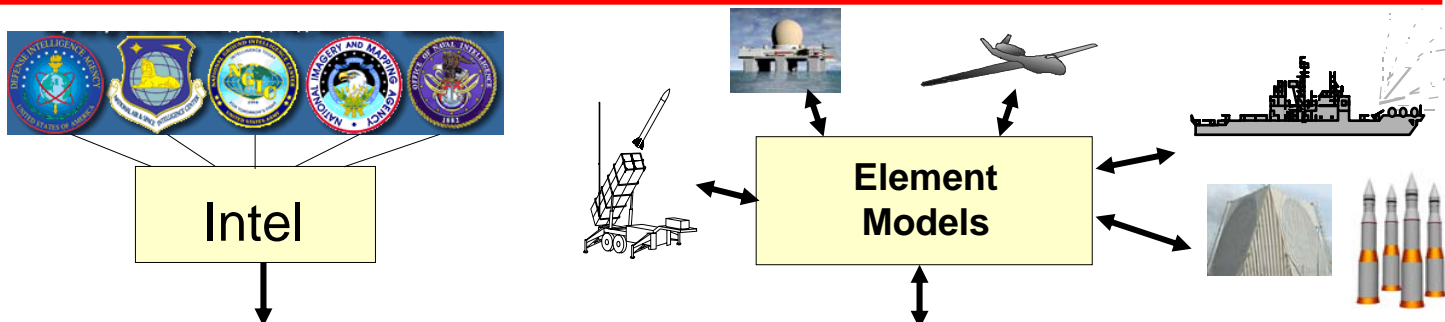IWS – Info Work Space

C2BMC (BMDS) Planner Supports the Three Phases of Planning

- **Adaptive/Deliberate Planning** (6-24 months before a battle)
  - Study effective deployment and coordination schemes
  - Assess acquisition strategies

- **Crisis Action Planning** (hours or days before an attack, based on updated information)
  - Assess likely threat scenarios and support element placement to maximize protection of critical assets
  - Support development of element coordination strategies to deconflict elements across threats and missions

- **Dynamic Planning** (near real time adaptation for changing situations) in close coordination with GEM (execution planning)
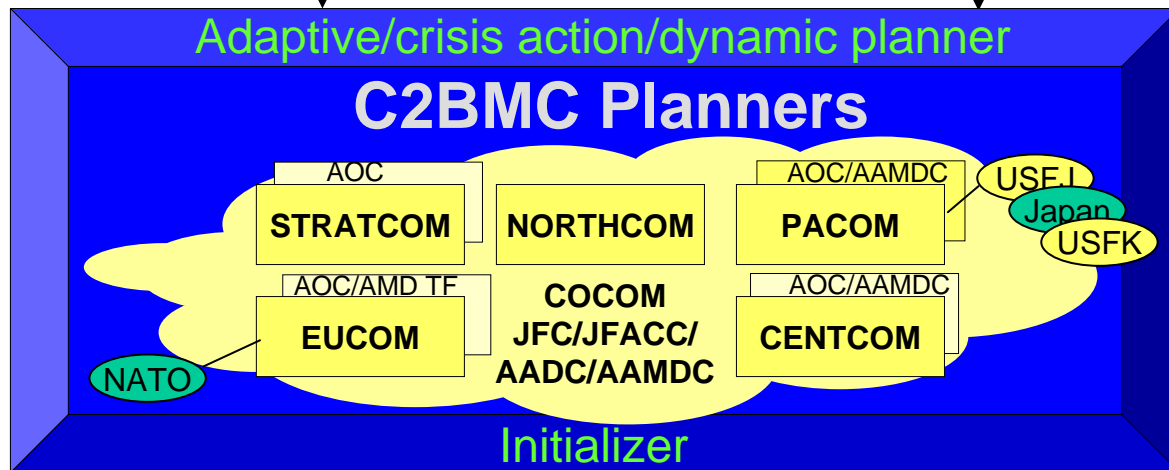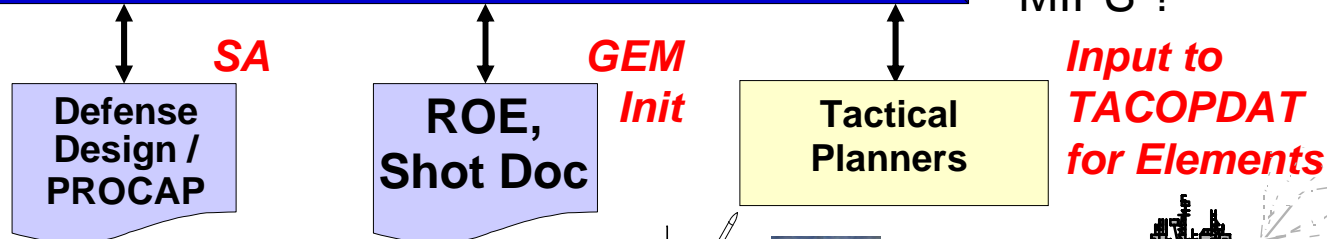
C2BMC Planner (JDP Upgrade)
Vision Joint IAMD

Data Producers

Intel

Element Models

Other Mission Supporting Data

Integrated Planning Service

Adaptive/crisis action/dynamic planner

C2BMC Planners

AOC
STRATCOM

NORTHCOM

AOC/AAMDC
PACOM

USFJ
Japan
USFK

AOC/AMD TF
EUCOM

COCOM JFC/JFACC/ AADC/AAMDC

AOC/AAMDC
CENTCOM

NATO

Initializer

ITO, TNL, JPTL, I3, ISR Plan, AO / IO Plan, Warning (JWARN)

MIPS ?

Planning Data Consumers

SA

GEM Init

Input to TACOPDAT for Elements

Defense Design / PROCAP

ROE, Shot Doc

Tactical Planners

Acronyms
AADC – Area Air Defense Commander
AAMDC – Area Air and Missile Defense Commander
AO/IO – Attack Operations/Integrated Operations
C2BMC – Command Control Battle Management and Communications
COCOM – Combatant Command
I3 – Integrated Intelligence and Imagery
ISR – Intelligence, Surveillance & Reconnaissance
ITO – Integrated Tasking Order

JFC – Joint Force Commander
JFACC – Joint Force Air Component Commander
JPTL – Joint Prioritized Target List
JWARN – Joint Warning and Reporting Network
PROCAP – Protected Capability
ROE – Rules of Engagement
TACOPDAT – Tactical Operations Data
TNL – Target Nomination List

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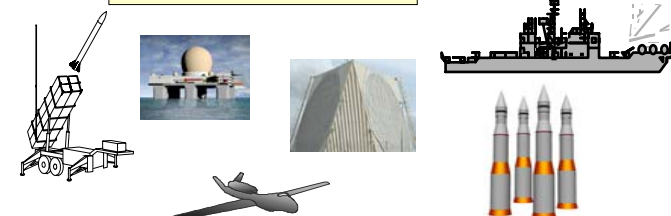
C2BMC BMDS Planning Architecture Concept

COCOM ✓

JFC ✓

✓ **JFACC /AADC Comp./ RADCs**

AAMDC ✓
JFMCC

Service Tactical Cmdrs
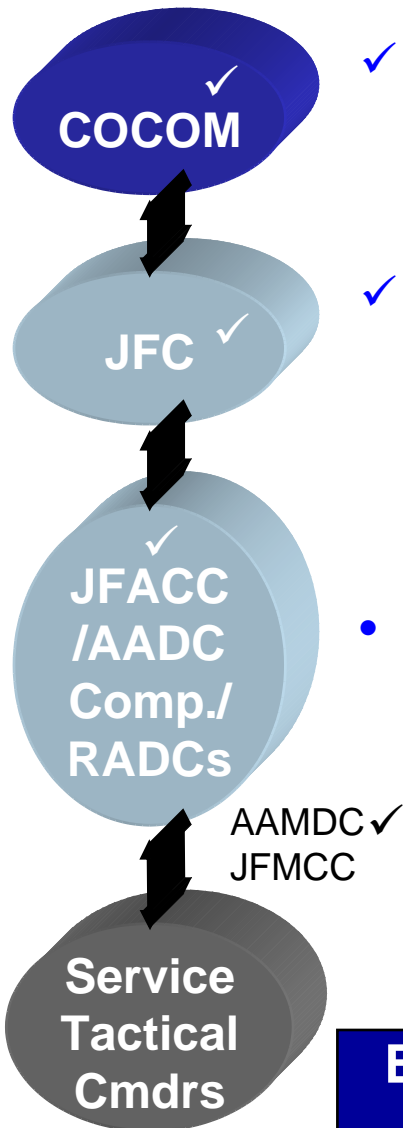
✓ **Strategic Level:** STRATCOM and COCOMs use the C2BMC to:
- Synchronize Intelligence Preparations of the Battlespace (IPB) (launch points, intent, aimpoints)
- Develop Friendly Course of Action (COA) guidance to COCOMs

✓ **Operational Level:** COCOM, Joint Forces Commander (JFC), Joint Forces Air Component Commander (JFACC) use C2BMC to:
- Understand IPB (launch points, intent, aim points)
- Develop and evaluate Friendly COA options
- Create Initial Defense Design to serve as tasking when confirmed as feasible by sensor and weapon elements

• **Tactical Level:** Uses AMDWS and the AEGIS BMD Mission Planner to:
- Receive IPB (launch points, intent, aim points) as inputs
- Receive Friendly COA options to evaluate
- Validate Mission Tasks with refinements (e.g., search sectors to accomplish mission, P_{ES} achievable for tasking)
- Integrate and optimize Service specific battle command requirements
- Initialize sensors and weapons

EVOLVING PLANNING ARCHITECTURE TO REMAIN CONSISTENT WITH EXISTING JOINT DOCTRINE

✓ = C2BMC Planner at this level

Spiral 6.2 C2BMC Planner User Interface
(Notional)

Plan Versions

Plans on each Server

Defense Designs

Configured Servers (Collaboration Support)

Contingencies, Follow-on Defense Designs

Planner* Analysis Metrics & Results
(Notional)

Ballistic Missile Launch Locations

Area Protected, PES
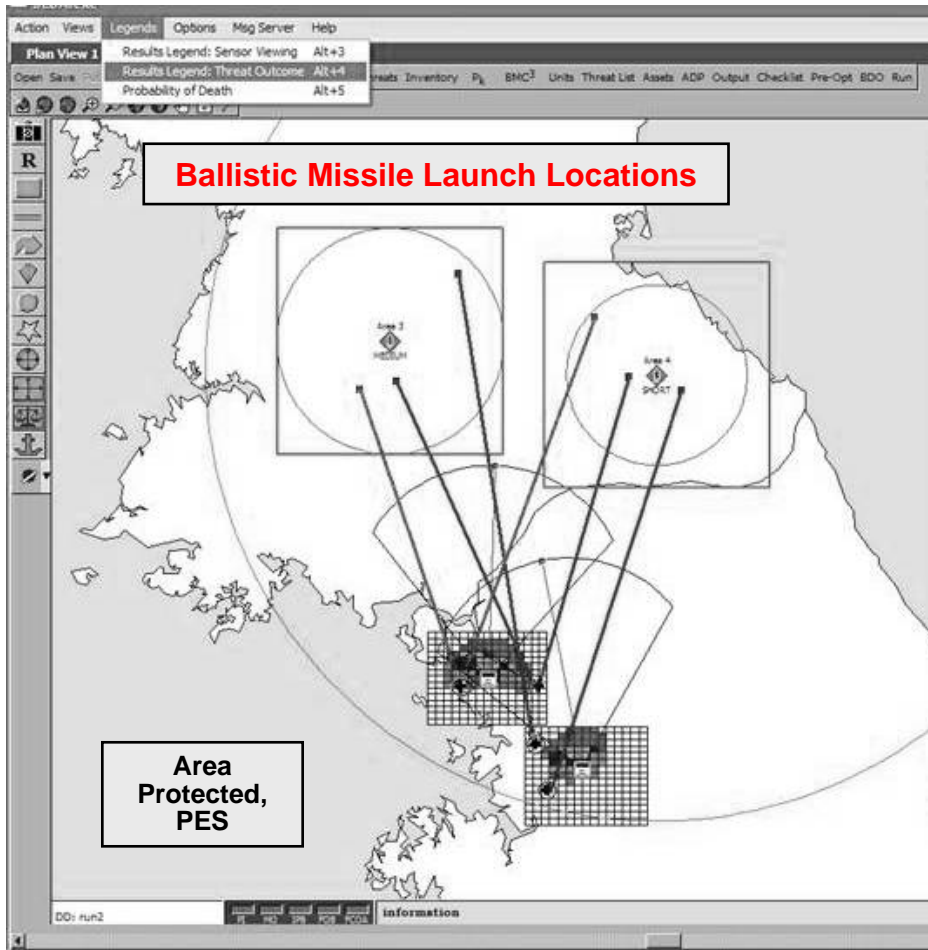
- **Footprint and Defended Area Calculations**
  - Measures of Effectiveness (MoEs)
    - Probability of Engagement Success (P_{es})
    - Number of Engagement Opportunities
    - Earliest Detection Time
    - Avg Time in Track
    - Avg Time in track post-boost
    - Avg latest lost track time
    - Avg earliest Intercept
  - Most stressing threats identified
    - Support to Offense-Defense Integration

- **Operating Area View**
  - Identifies Optimal Platform Positions
  - Includes All MoEs
  - Provides Architecture Context for Optimal Element Placement

- **Scenario Analysis**
  - Addresses issues with raid size and inventory usage

- **Analysis Results by Different OPSCAP Combinations**

*JEDA – Joint Engine for Defense Analysis, the analysis component of the C2BMC Planner

MDA XML – CIXS
Convergence Strategy

Air Defense Namespace

AMD Namespace

CIXS v1.3 (FIELDING)

CIXS v2.x (DEVELOPMENTAL)

Common IAMD XML Schema (CIXS) v3.0

CIXS v3.x

Track Data (partial)

C2BMC Planner XML

Harmonization

Data Xwalks

BMDS XML Standard (BXS) [SA]

Harmonization

Data Xwalks

Missile Defense Namespace

1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q

2007   **CY**   **2008**
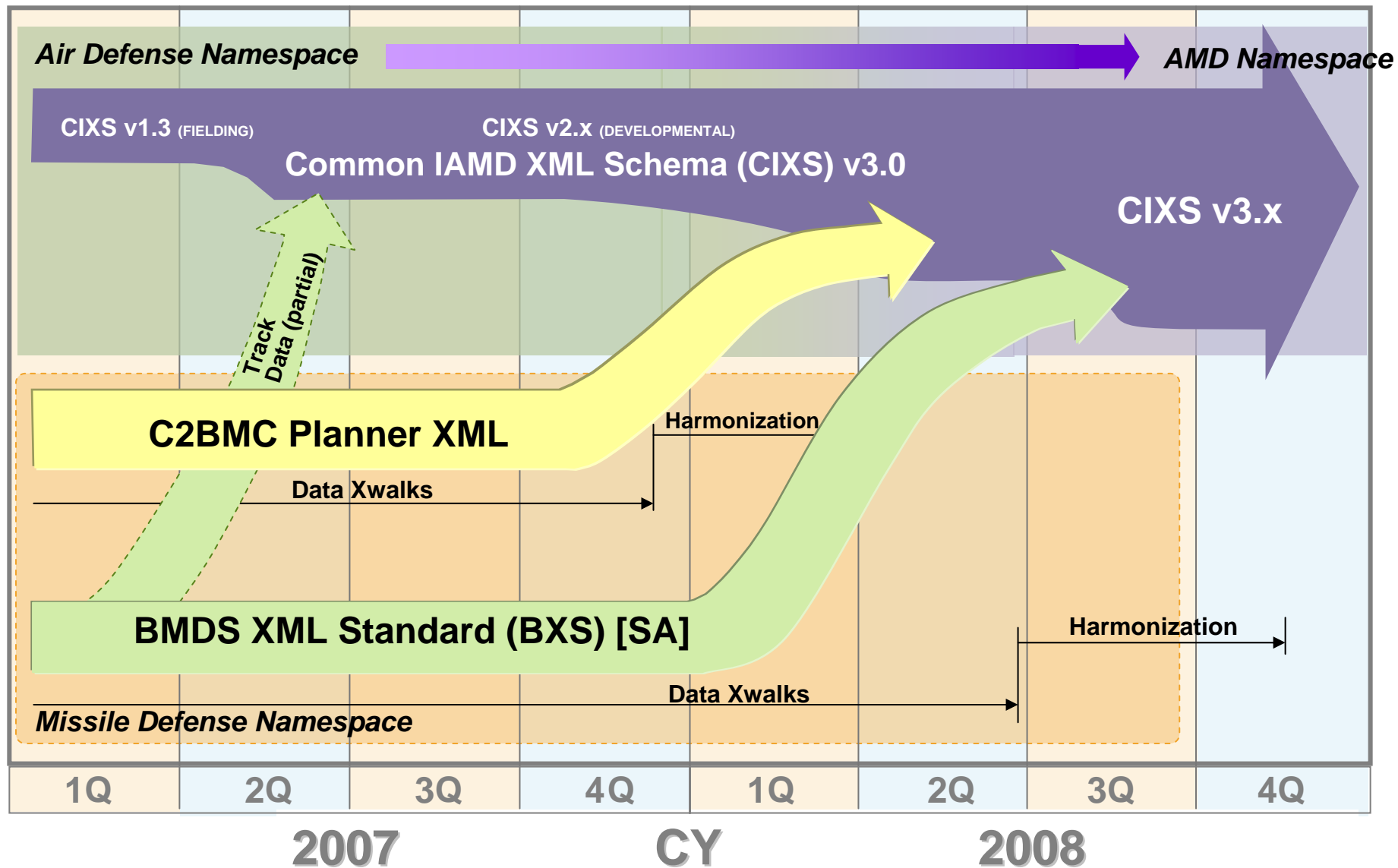
Accomplishments

- **Current Deployment**
  - PACOM, STRATCOM, NORTHCOM C2BMC Suites
  - Laptop planners at EUCOM, CENTCOM, USFJ, USFK
  - Laptop planners at 32nd, 94th, 263rd AAMDC and 357th AMDD

- **Interfaces**
  - AEGIS BMD interface
    - Successful demo – Feb 07
    - Evaluating how best to interface with MOC and to JFMCC to AEGIS BMD
    - Dialog on supplying laptops to MOC now
  - AMDWS/PATRIOT interface
    - Improvements on contract
  - THAAD interface
    - Initial interface content identified
    - Working XML interface **(CIXS)**
  - NATO
    - Planner in test
    - CIXS 3.0 will be interface (also for IBCS)

Next Steps

- **On track for analysis improvements**
  - Blue Force Validation; Joint Analysis Group; earth rotation; threat coordination
  - Improving user interface and simplifying coding
  - Warfigher/Developer forum – Oct 07

- **Developing way ahead for JIAMD**
  - Army/MDA IAMD MOU (AAMDC)
    - MDA/AMDWS/IDD (IBCS) evaluating how best to supply planner as GFE
  - Implementing into ETOC for 32nd AAMDC
  - Implementing JIAMD for AOC
    - AF on-board – plan is to replace JDP
  - Discussion on-going with Navy N-86 on collaborative interface to new MOCs

- **Move the planner into the NECC environment**

IBCS – IAMD Battle Command System
AMDWS – Air and Missile Defense Work Station
IAMD – integrated Air and Missile Defense
IDD – Integrated Defense Designer
AOC – Air Operations Center
BSD – Battle Space Designer
NECC – DISA's Net Enabled Command Capability

C2BMC Planner: Born from JDP (Air Defense) -- Migrating to Air and Missile Defense

Summary

MDA/BC looks forward to working with the IBCS contractors and the IAMD PO in this critical effort.